MLSC 552: CONSERVING BIODIVERSITY
Fall 2020: Course Syllabus
August 26th – December 9th, 2020
Wednesday 6:00-9:00PM; ONLINE

Instructor: Cassidy B. Johnson, Ph.D.
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Office hours: *Because of the virtual nature of the course, I will not be able to meet anyone in person; however, I can make myself available via Zoom to meet as our schedules allow. Please email me to set up an appointment.*

Reading: We will using Elizabeth Kolbert's, *The Sixth Extinction: An Unnatural History* (2014; Bloomsbury Press, London; ISBN 9781408851241) as the focus of our discussion sessions. This book can be purchased at any bookstore (even at Half Price Books). *I will be asking you to read Chapter 1 in preparation of our first class meeting, so make sure to acquire a copy before the first day of class.*

Course Description: This course examines the field of conservation biology, which is an amalgam discipline that incorporates biology, ecology, political science, economics, sociology, and several other avenues of study. At the very core of this discipline however, is the protection and preservation of biodiversity. In this course we will explore the definition of biodiversity and why is it is important from an ecological, societal, and political perspective; including why biodiversity is essential for the perpetuation of human existence. We will investigate the ongoing, anthropogenic threats to biodiversity as well as the principles of conservation management that are being used to mitigate the loss of species on both a local and global scale.

Course Objectives:
1) To learn the fundamental principles of conservation biology, with an emphasis on biodiversity.
2) To gain familiarity with the tools and techniques utilized by conservation scientists and planners.
3) To analyze and critically evaluate ideas, arguments, and points of view related to the field of conservation biology.
4) To synthesize and apply the course material though effective, scientific communication.
5) To gain an appreciation and awareness of local conservation issues

Course schedule: I make every effort to adhere to the schedule; however, I reserve the right to modify the schedule if necessary. Students will be notified in a timely manner of any change to the schedule or assignment deadlines.

Tentative Course Schedule Fall 2020

Date	Chapter discussion	Class meeting topic
26-Aug	Chapter 1:The sixth extinction Instructor Presentation	Life's relationship with extinction
2-Sep	Chapter 2: Mastodon's Molars	Why does biodiversity matter?
9-Sep	Chapter 3: The Original Penguin	Threats to biodiversity
16-Sep	Chapter 4: The Luck of the Ammonites	Rarity & extinction: What's wrong with those pesky endangered species?
23-Sep	Chapter 5: Welcome to the Anthropocene	Houston, we have biodiversity!
30-Sep	Chapter 6:The Sea Around Us	Measuring biodiversity
7-Oct	Chapter 7:Dropping Acid	Climate change IS kind of a big deal.
14-Oct	Chapter 8: The Forest and the Trees	Nightmare material: Habitat fragmentation
21-Oct	Chapter 9: Islands on Dry Land	Is bigger always better? The SLOSS debate
28-Oct	Chapter 10: The New Pangaea	The "new" conservation: Urban biodiversity
4-Nov	Chapter 11:The Rhino Gets an Ultrasound	Can conservation help fight racism? Environmental justice topics in Texas
11-Nov	Chapter 12:The Madness Gene	The future of conservation: Can tech save our planet?
18-Nov	Chapter 13: The Thing with Feathers	Class discussion of Zine
25-Nov	Thanksgiving - NO CLASS	
2-Dec	Zine presentation & review	Watch videos and review Zines!
9-Dec	Final Zine submission & Holiday Party!	

Optional field trips: The instructor will also be hosting two, optional weekend field trips. The dates of these field trips will be decided the first day of class;

<u>Field trip 1:</u> A visit to the Houston Arboretum & Nature Center; iNaturalist demonstration

<u>Field trip 2:</u> A visit to the MD Anderson prairie restoration; iNaturalist demonstration

Regulations regarding social distancing guidelines will be discussed prior to each field trip. Any student who feels unsafe attending will not be penalized. No attendance grade is associated with either opportunity; however, students will be encouraged to visit the site independently.

Student Evaluation: Assessment of student performance will be based on their chapter review, their participation in the discussions, classroom activities, and on the final project. See breakdown of point system below:

Grade breakdown

Assignment	Points	% Grade	Additional details
Expert chapter review	100	20%	50 pts each: 2 chapters per student
Reading questions	60	12%	5 pts each; 12 chapters total
"In class" assignments	75	15%	3 Assignments, 25 points each
Zine draft	75	15%	
Zine draft feedback	40	8%	
Final zine contribution	150	30%	
Total points	500	100%	

Grading: Grades will be calculated out of 100 points. Grades will be distributed as follows: ≥90% A , 80-89% B , 70-79% C, 60-69% D, ≤59% F.

Description of student assignments:

Expert chapter review discussions (100 points total): We will be reading The Sixth Extinction, by Elizabeth Kolbert as a part of our course this semester. Each student will be assigned two chapters for which they will be the "expert" reviewer. The reviewer will dissect the chapter and be able to respond to questions or comments by the other students. The reviewer will present the chapter and external content using 1 or 2 pages of the Google slide zine format. The slide will be presented by the reviewer to the class on their assigned day and will be used as a focal point of discussion for the chapter.

"In class" activities (75 points total): Three "in-class" assignments will be assigned that will involve at home, hands-on activities that will help to further explore the course topics. These activities may include conducting a "mini" biodiversity analysis, and examining and interpreting biodiversity data.

"Reading questions (60 points total): For everyone who is NOT an expert reviewer for a chapter, at least three questions or insights will be developed from reading the chapter. The discussion time will be used to answer the questions. The questions and answers will be submitted on the day of the class discussion and compiled and posted on Canvas.

Zine project (265 points total): Students will use the material they have learned in class to produce a conservation-themed zine. Student will have an opportunity to produce a rough draft and seek feedback from their peers on the production of their individual zine. The final product will be shared publically. More information about the zine, including formatting, required content and grading is provided in Canvas.

Absences: Absences and missed work will be dealt with on a case-by-case basis. If you know you will be missing a class, please contact me as soon as possible.

Disabilities: Any student with a disability that requires accommodation is encouraged to speak with me within the first week of the class. The student is additionally encouraged to contact the Director of Disabled Student Services in the Ley Student Center.